

AMENDMENTS**Amendments to the Claims:**

1. (Currently amended) An access point mitigation apparatus for mitigating access point data rate degradation with respect to a wireless communication between an access point and a client, the access point mitigation apparatus comprising:

a channel assessment module configured to assess a plurality of communications channels and ~~establish~~ maintain a plurality of communications quality parameters, each communications quality parameter associated with one of the plurality of communications channels, the channel assessment module further configured to update the plurality of communications quality parameters in response to identifying a type of interference source based on the characteristics of an interference signal present on one of the plurality of wireless communications channels;

a channel selection module configured to select a best wireless communications channel from the plurality of communications channels based on the plurality of communications quality parameters; and

a channel connection module configured to facilitate a new wireless communication between the access point and the client over the best wireless communications channel.

2. (Currently amended) The access point mitigation apparatus of claim 1, wherein the channel assessment module is further configured to update the plurality of communications quality parameters in response to assessing ~~assess~~ a power intensity and a duration of an interfering signal present on one of the plurality of wireless communications channels.

3. (Currently amended) The access point mitigation apparatus of claim 1, wherein identifying a type of interference source based on the characteristics of an interference signal comprises determining a correlation between the characteristics of the interference signal and characteristics produced by interference sources selected from the group consisting of a microwave oven, a cellular phone, an access point, a personal digital assistant, a desktop computer, a printer with a wireless adapter, and a laptop source ~~is a source the channel assessment module is further configured to assess a type of interference source communicating an interfering signal present on one of the plurality of wireless communications channels.~~

4. (Original) The access point mitigation apparatus of claim 1, further comprising a client notification module configured to notify the client of the best wireless communications channel selected.

5. (Original) The access point mitigation apparatus of claim 1, further comprising a channel switching module configured to discontinue a previous wireless communication with the client over a previous wireless communications channel prior to facilitating the new wireless communication between the access point and the client over the best wireless communications channel, wherein the previous wireless communications channel is one of the plurality of communications channels that is not the best communications channel.

6. (Original) The access point mitigation apparatus of claim 1, wherein the channel assessment module is further configured to identify one of the plurality of communications channels on which no interference is detected as an interference-free channel and to discontinue assessing the plurality of communications channels in response to identifying the interference-free channel and wherein the channel selection module is further configured to select the interference-free channel as the best wireless communications channel.

7. (Original) The access point mitigation apparatus of claim 1, wherein the channel assessment module is further configured to assess the plurality of communications channels and establish the plurality of communications quality parameters upon initial startup of the access point.

8. (Original) The access point mitigation apparatus of claim 1, wherein the channel assessment module is further configured to periodically assess the plurality of communications channels and update the plurality of communications quality parameters as specified by a user.

9. (Original) The access point mitigation apparatus of claim 1, wherein the channel assessment module is further configured to track a plurality of communications quality parameter histories.

10. (Original) The access point mitigation apparatus of claim 9, wherein the channel assessment module is further configured to assess the plurality of communications channels and update the plurality of communications quality parameters in response to a decrease in one of the plurality of communications quality parameter histories.

11. (Original) The access point mitigation apparatus of claim 1, wherein the channel assessment module is further configured to determine the presence of an interfering signal on one of the plurality of communications channels.

12. (Currently amended) A system for mitigating access point data rate degradation with respect to a wireless communication between an access point and a client, the system comprising:
a network server configured to communicate with the access point over a network;

the access point configured to communicate with the client over one of a plurality of communications channels;

a channel assessment module configured to assess the plurality of communications channels and ~~establish~~ maintain a plurality of communications quality parameters, each communications quality parameter associated with one of the plurality of communications channels, the channel assessment module further configured to update the plurality of communications quality parameters in response to identifying a type of interference source based on the characteristics of an interference signal present on one of the plurality of wireless communications channels;

a channel selection module configured to select a best wireless communications channel from the plurality of communications channels based on the plurality of communications quality parameters; and

a channel connection module configured to facilitate the new wireless communication between the access point and the client over the best wireless communications channel.

13. (Original) The system of claim 12, wherein the client is configured to scan the plurality of communications channels for the best wireless communications channel selected and to communicate with the access point over the best wireless communications channel.

14. (Original) The system of claim 12, wherein the client is configured to receive a notification from the access point of the best wireless communications channel selected and to communicate with the access point over the best wireless communications channel.

15. (Currently amended) A client mitigation apparatus for mitigating access point data rate degradation with respect to a wireless communication between an access point and a client, the client mitigation apparatus comprising:

a notification module configured to receive a notification of a best wireless communications channel in response to a transmission of a notification signal from the access point, wherein the plurality of communications quality parameters are updated in response to identifying a type of interference source based on the characteristics of an interference signal present on one of the plurality of wireless communications channels; and

a channel switching module configured to discontinue a previous wireless communication with the access point over a previous wireless communications channel prior to facilitating a new wireless communication with the access point over the best wireless communications channel.

16. (Currently amended) A process for mitigating access point data rate degradation with respect to a wireless communication between an access point and a client, the process comprising:

assessing a plurality of communications channels;

~~establishing~~ maintaining a plurality of communications quality parameters, each communications quality parameter associated with one of the plurality of communications channels, wherein the plurality of communications quality parameters are updated in response to identifying a type of interference source based on the characteristics of an interference signal present on one of the plurality of wireless communications channels;

selecting a best communications channel from the plurality of communications channels based on the plurality of communications quality parameters; and

facilitating a new wireless communication between the access point and the client over the best communications channel.

17. (Original) The process of claim 16, further comprising notifying the client of the best wireless communications channel selected.

18. (Original) The process of claim 16, further comprising discontinuing a previous wireless communication with the client over a previous wireless communications channel prior to facilitating the new wireless communication with the client over the best wireless communications channel, wherein the previous wireless communications channel is one of the plurality of communications channels that is not the best communications channel.

19. (Currently amended) The process of claim 16, further comprising identifying one of the plurality of communications channels on which no interference is detected as an interference-free channel, discontinuing assessing the plurality of communications channels in response to identifying the interference-free channel, and selecting the interference-free channel as the best ~~network~~ wireless communications channel.

20. (Currently amended) A process for mitigating access point data rate degradation with respect to a wireless communication between an access point and a client, the process comprising:

- monitoring and assessing a plurality of communications channels;
- ~~establishing~~ maintaining a plurality of communications quality parameters, each communications quality parameter associated with one of the plurality of communications channels;
- selecting a best wireless communications channel from the plurality of communications channels based on the plurality of communications quality

parameters, wherein the plurality of communications quality parameters are updated in response to identifying a type of interference source based on the characteristics of an interference signal present on one of the plurality of wireless communications channels;

notifying the client of the best wireless communications channel selected;
discontinuing a previous wireless communication with the client over a previous wireless communications channel; and
facilitating a new wireless communication between the access point and the client over the best wireless communications channel.

21. (Currently amended) A computer readable storage medium comprising computer readable code configured to carry out a process for mitigating access point data rate degradation with respect to a wireless communication between an access point and a client, the process comprising:

assessing a plurality of communications channels;
~~establishing~~ maintaining a plurality of communications quality parameters, each communications quality parameter associated with one of the plurality of communications channel, wherein the plurality of communications quality parameters are updated in response to identifying a type of interference source based on the characteristics of an interference signal present on one of the plurality of wireless communications channels;

selecting a best communications channel from the plurality of communications channels based on the plurality of communications quality parameters; and

facilitating a new wireless communication between the access point and the client over the best communications channel.

22. (Currently amended) The computer readable medium of claim 21, wherein the process further comprises updating the plurality of communications quality parameters in response to assessing a power intensity and a duration of an interfering signal present on one of the plurality of wireless communications channels.

23. (Currently amended) The computer readable medium of claim 21, wherein identifying a type of interference source based on the characteristics of an interference signal comprises determining a correlation between the characteristics of the interference signal and characteristics produced by interference sources selected from the group consisting of a microwave oven, a cellular phone, an access point, a personal digital assistant, a desktop computer, a printer with a wireless adapter, and a laptop ~~the process further comprises assessing a type of interference source communicating an interfering signal present on one of the plurality of wireless communications channels.~~

24. (Original) The computer readable medium of claim 21, wherein the process further comprises notifying the client of the best wireless communications channel selected.

25. (Original) The computer readable medium of claim 21, wherein the process further comprises discontinuing a previous wireless communication with the client over a previous wireless communications channel prior to facilitating the new wireless communication between the access point and the client over the best wireless communications channel, wherein the previous wireless communications channel is one of the plurality of wireless communications channels that is not the best communications channel.

26. (Currently amended) The computer readable medium of claim 21, wherein the process further comprises identifying one of the plurality of communications channels on which no

interference is detected as an interference-free channel, discontinuing assessing the plurality of communications channels in response to identifying the interference-free channel, and selecting the interference-free channel as the best network wireless communications channel.

27. (Original) The computer readable medium of claim 21, wherein the process further comprises assessing the plurality of communications channels and establishing the plurality of communications quality parameters upon initial startup of the access point.

28. (Original) The computer readable medium of claim 21, wherein the process further comprises periodically assessing the plurality of communications channels and updating the plurality of communications quality parameters as specified by a user.

29. (Original) The computer readable medium of claim 21, wherein the process further comprises tracking a plurality of communications quality parameter histories.

30. (Original) The computer readable medium of claim 29, wherein the process further comprises assessing the plurality of communications channels and updating the plurality of communications quality parameters in response to a decrease in one of the plurality of communications quality parameter histories.

31. (Original) The computer readable medium of claim 21, wherein the process further comprises determining the presence of an interfering signal on one of the plurality of communications channels .

32. (Currently amended) A computer readable storage medium comprising computer readable code configured to carry out a process for mitigating access point data rate degradation with respect to a wireless communication between an access point and a client, the process comprising:

monitoring and assessing a plurality of communications channels;

~~establishing~~ maintaining a plurality of communications quality parameters, each of the communications quality parameters associated with one of the plurality of communications channels, wherein the plurality of communications quality parameters are updated in response to identifying a type of interference source based on the characteristics of an interference signal present on one of the plurality of wireless communications channels and in response to assessing a power intensity and a duration of an interfering signal present on one of the plurality of wireless communications channels;

selecting a best wireless communications channel from the plurality of communications channels based on the plurality of communications quality parameters;

notifying the client of the best wireless communications channel selected;
discontinuing a previous wireless communication with the client over a previous wireless communications channel; and

facilitating a new wireless communication between the access point and the client over the best wireless communications channel.

33. (Currently amended) An access point mitigation apparatus for mitigating access point data rate degradation with respect to a wireless communication between an access point and a client, the apparatus comprising:

means for assessing a plurality of communications channels;

means for establishing a plurality of communications quality parameters, each communications quality parameter associated with one of the plurality of communications channel;

means for identifying a type of interference source based on the characteristics of an interference signal present on one of the plurality of wireless communications channels;

means for selecting a best communications channel from the plurality of communications channels based on the plurality of communications quality parameters; and

means for facilitating a new wireless communication between the access point and the client over the best communications channel.